Request for Economic Stimulus Funds

Concept Proposal

Submitters (Name of Workgroup & Chair/Co-Chairs):
Technology & Networking – Al Lind Chair
Innovative Applications Writing Team - Enid Wohlstein, KYVL, Team Captain

Project Title: Innovative Applications for Information Literacy, Research and Learning

Project Partners (Known or Anticipated):

- Kentucky Department for Libraries and Archives
- Kentucky Department of Education (the K-12 public schools)
- Public Postsecondary – 8 universities, 16 community and technical colleges
- Private Postsecondary
- Kentucky's Public Libraries

Project Background & Purpose (Justification for Project):

Kentucky Virtual Library functions as a consortial hub of libraries throughout Kentucky. By encouraging collaboration between libraries and partners in education, KYVL provides all Kentuckians access to a core collection of digital resources, including research databases covering a broad range of disciplines and content types from primary sources to popular- and peer-reviewed journals. KYVL delivers information and research content regardless of geographic location, supporting both classroom and distance learning and Kentucky's broader needs for working and living. KYVL's mission is that all Kentuckians will have equitable access to quality library and information resources.

This proposal addresses several initiatives that are in start-up phases or designed but lacking funding for launch. We seek to create "proof of concept" products based on existing and emerging technologies, some web-based and others proprietary, to show that our collaborative strengths can produce valid, engaging, creative and cost-effective library, teaching and classroom tools. The Web 2.0 mentality is to use commercial, and often freely available, social networking tools or open source applications and use those avenues to reach the end-user, the public, the citizenry. That same mentality, the millennial or net-generation mindset, also means jumping in at will and jumping out, or abandoning the application, if it does not "work" or something better comes available. In education, the pedagogy and curriculum should be the foundation and the applications building upon that bedrock. In libraries, user demand and findability of resources should drive the applications and process.[1] (Roberts, 2005)

[1] 2009, http://www.educause.edu/Resources/EducatingtheNetGeneration/TechnologyandLearningExpectati/6056

Project Description (General Goals & Implementation Strategies):

The "Innovative Applications" request encompasses several projects all tied to supporting a new learning culture and providing foundational skills for information literacy and critical thinking, funding: 1) interactive information literacy and research skills applications, 2) expanding Kentucky's use of the Second Life® multi-user virtual environment, and 3) software licensing clearinghouse.

Kentucky already has well-established statewide initiatives based on relationships between agencies and multi-type libraries. Increased access to computers, availability of broadband, wireless Internet, versatile mobile phones and devices and more applications for self-publishing is rapidly and drastically shifting the learning culture. We are at Web 2.0, which means Learning and Library 2.0 is also a "now" imperative – students and users are not sitting still for a "wait and see" education, classroom, or library.[2] (Christensen, 2008) While well-poised for collaborative programs and projects, funding is the ever-present challenge. Kentucky has fewer funds for mainstay programs let alone dollars to put towards initiatives which are not firmly established.

Interactive Learning Tools: Update the existing "Space Dog and the Research Rocket" web-based tutorial. Launched in 2002, Space Dog was built to teach K-5 students inquiry skills, as specified in the Kentucky core content standards. The collaborative project features an information literacy tutorial - a step-by-step guide to help students learn how to research online. This important skill is vital for student success in our information economy and for the future economy of the Commonwealth of Kentucky.

The project will also fund similar interactive and game-like interfaces for Kentucky's middle and high school students. Today's students use these types of interactive environments and this project would expand the initiative to teach inquiry and information literacy skills in a format familiar to Millenials, or the Net Generation. Our students are changing in their needs and expectations; whether it is the incoming freshman at age seventeen or eighteen known as Millenials, Gen Y or the Net Gen to the returning learners in their 30's, known as Gen X. According to the Pew Internet & American Life Project report *Teens and Technology* "81% of teen internet users play games online."[3] And those returning or first- time learners are gamers too.

Students must be engaged in the learning process. KYVL wishes to establish computer and information literacy tutorials and assessments for all ages in K12, and create research games for middle and high school as well as undergraduates. KYVL supports information literacy instruction and assessment as a foundation to learning – a student, adult, learner, or citizen, must be able to find information, evaluate the sources, read and understand the information and be able to act on or assimilate what has been read. Further study and input from KYVL user communities may also influence the addition of tools for older students and teach concepts on research skills and critical thinking for undergraduates.

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[2] Christensen, Clayton M., Michael B. Horn, and Curtis W. Johnson. Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns. New York: McGraw-Hill, 2008.

[3] http://www.pewinternet.org/~/media//Files/Reports/2005/PIP_Teens_Tech_July2005web.pdf

People learn in different ways, whether it is influenced by age, education, preference or some other factor. The **Entertainment Software Association**, listed in their "Top 10 Industry Facts" in February 2009: "sixty-three percent of parents believe games are a positive part of their children's lives." Research from other sources confirm the trends of parents, children and families playing learning games and educational providers offering what is called "edutainment" to learners. [4] (ESA, 2009)

Learners expect media-rich tools and non-static websites and other interactive environments that challenge them. KYVL must provide these tools on behalf of our partner schools and universities in order to prepare the students for secondary and postsecondary study as well as the workforce. The project would update Space Dog and create four additional interactive applications to cover middle school through undergraduate level.

Second Life®:

Second Life® is an online virtual world created by and for residents, i.e. the users – a multi-user virtual environment (MUVE). The main grid is the adult world and universities and businesses inhabit the main grid. A Teen Second Life® is a restricted environment for ages 13-17 where schools and educational entities hold classes, labs, and more in a heavily patrolled, safe space. It is 3D and open to possibility. Educators and libraries are rapidly adopting this environment as another way to reach teens and students and engage them in the learning process. (Linden Lab)

Is it a passing fad? IBM "has built a dozen islands, some for interfacing with the public and others for employees only. At the same time, Big Blue is building its own virtual world for employees, a sort of next-generation intranet. And therein lies Second Life®'s significance. It's not that Second Life® itself will become a dominant Internet destination like the Web. Instead, it represents a model that is likely to become the next approach to online content." [5] (Holtz, 2007) IBM is one of hundreds of companies and universities exploiting this platform.

The Second Life® platform offers opportunities for simulations and student-built environments – exactly what is needed for engaged, student-centric learning. The International Society for Technology and Education (ISTE) makes full use of the environment and "provides a venue for educators to network and learn from each other about real-life education opportunities and best practices in Second Life®."[6] (ISTE in SL) K12 students and undergraduates have an aptitude for technology-enhanced learning. Students wish to engage in online learning communities and use online discussion applications such as blogs, wikis, social networking sites for analysis and enhancing the learning experience. We as educators and librarians need to recognize and "allow for creativity" and their constant need for social connectedness. Second Life® can offer them

[4] 2009, http://www.theesa.com/facts/top_10_facts.php

[5] Holtz, Shel. "Another world. (Cover story)." Communication World 24.3 (May 2007): 16-19.

[6] 2009, http://www.iste.org/Content/NavigationMenu/Membership/Member_Networking/ISTE_Second_Life.htm

the environment to "develop opportunities for experiential learning, field experiences, simulations and case method approaches."[7] (Coates, 2007)

Kentucky Virtual Campus already owns an island for collaborative projects with educators, universities, faculty, schools and libraries. Many Kentucky universities have their own developed island for events, displays, classrooms and community interaction. The project would expand upon the KYVC island creating shared spaces, linkages to partner universities, schools, Kentucky Virtual Library and the education resources offered by the consortium.

Software Licensing Clearinghouse:

The Kentucky Virtual Campus and the Kentucky Virtual library would like to create a software licensing clearinghouse to purchase statewide licenses for a pool of software products that would be available to every school, college, university or library in the state. Both entities have a proven track record of cost efficiencies realized by the Commonwealth through the collective buying power of statewide licenses. These licenses would include such items as: Plagiarism Detection Software, Laboratory Enactment Software (such as chemistry, biology, etc.), and Homework Help/Tutoring Services. These resources and services will continue to level the playing field for all students and Kentuckians in their pursuit of lifelong learning. The cost savings realized through statewide purchasing and management would be significant. Startup funding would provide the core set of applications and provide the time necessary for testing and determining cost recovery fee structures for tools retained long-term by participants.

Funding is needed for a startup collaborative to explore uses of shared services like lab experiment simulations or web-based tutoring/homework help services. These applications offer educators a new way of reaching potential and currently enrolled learners who are already familiar with web-based tools. Faculty and teachers need access to plagiarism detection software in order to combat "cut and paste" authoring in student work.

Plagiarism Detection Software would be of invaluable assistance to teachers across the state. The time saving aspect of this utility would free up teachers to concentrate on the content and writing styles of their students. It could also be a good training aid for students to help them learn the responsibility of writing material in their own words and not *to* rely on prepared responses from other sources.

The acquisition of Laboratory Enactment Software will help enhance the laboratory experience for students whose school districts cannot provide a robust laboratory environment because of financial, space, or staffing constraints. Laboratory enactment software can contribute to the safety of the students during a laboratory experiment. Students can be exposed to a wider range of laboratory experiments when done virtually because there is no need for expensive supplies and materials.

Currently, many public libraries offer K-12 students some form of Homework Help/Tutoring Services. The availability of this service depends upon budget and staffing adequacies o f the

[7] Coates, Julie. Generational Learning Styles. River Falls, Wis: LERN Books, 2007.

local library. By purchasing tutoring services on a statewide basis, every library or school would have equal access to this service. Once again, the playing field would be leveled for each Kentuckian for *access* to the information age. These services could also be made available to adult education learners and to postsecondary students enrolled in developmental courses.

Project Team (Project Manager(s), Content Experts, Instructional Designers, etc.):

- Engage key library personnel from postsecondary universities, the community & technical colleges, public libraries, Kentucky Department for Libraries and Archives, Department of Education, and high schools.
- Create kids and teens advisory groups and involve the Kentucky Student Technology Leadership Program.
- Leverage existing workgroups of content experts and hire additional FTE for project implementation, including project specialists, programmers, technical specialists, etc. as outlined in the budget below.

Project Budget & Amount of Economic Stimulus Funds Requested:

<u>Information Literacy and Research Skills Tutorials Second Life</u>
Update Space Dog (K-5) and create five additional applications for middle, high school, undergraduate and adult learners.

<u>Second Life island development</u>
Create and implement design for group spaces, lab simulations, auditoriums, classrooms, library spaces, linkages to subscription databases, other SL campuses and other elements.

<u>Software Clearinghouse</u>
Provide startup funding for creation and management of a software license clearinghouse to allow for test and trial of applications by partner agencies, schools and universities. Provide training, software, hardware.

Software Clearinghouse, funding for 2 years =	$1,500,000
2 technical specialists $50,000 each x 2 years =	$200,000
4 staff assistants for training, creating videos, demos, etc at 26,000 x 2 years =	$208,000
2 programmers/developers at 60,000 each for 1 year =	$120,000
Training, demos, videos and travel for 2 years =	$40,000